

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for detecting position information of a moving object, the apparatus comprising:

an RFID chip installed on a predetermined location of a road surface, for storing position information associated with the installed location;

a communication module mounted to a moving object, for emitting an RF (Radio Frequency) signal toward a road surface, and for receiving position information associated with the chip's installation location from the transponder located within a predetermined distance from the moving object using the RF signal; and

a reader for receiving position information associated with the chip's installation location from the communication module, and for reading current position information of the moving object.

2. (Previously Presented) The apparatus as set forth in claim 1,

wherein the chip includes

a memory for storing position information associated with the chip's installation location,

a controller driven by the RF signal created from the communication module, for reading position information from the memory, and

a RF block for receiving the RF signal from the communication module, transmitting the received RF signal to the controller, for receiving position information from the controller, and for transmitting the received position information to the communication module.

3. (Previously Presented) The apparatus as set forth in claim 2, wherein the memory stores ID (Identifier) information of individual chips, position information associated with installation positions of the chips, and road information associated with the installation positions of the chips.

4. (Currently Amended) The apparatus as set forth in claim 1, wherein the RFID chip is one of a plurality of RFID chips for storing position information associated with the installed location, and wherein the plurality of RFID chips are installed at center parts of individual traffic lanes and at regular intervals.

5. (Original) The apparatus as set forth in claim 1, wherein the communication module is adapted as a plurality of communication modules, one communication module being mounted to the front of the moving object, and another communication module being mounted to the rear of the moving object.

6. (Original) The apparatus as set forth in claim 1, wherein the reader stores position information received from the communication module and read time information for every position, and calculates moving speeds for every traveling interval of the moving object upon receiving a distance difference and a read time difference corresponding to individual position information.

7. (Original) The apparatus as set forth in claim 1,
wherein the reader includes
a buffer for storing position information received from the communication module,
a time generator for generating current time information, and transmitting the current time information to the buffer, and
a controller for receiving position information and time information for every position information from the buffer, detecting real-time position information of the moving object using the received position information, and calculating a moving speed of the moving object using the position information and the time information for every position information.

8. (Original) The apparatus as set forth in claim 1, wherein the reader transmits the read current position information to an external device.

9. (Original) The apparatus as set forth in claim 1, wherein the position information includes current position information and corresponding road condition information.